

§ 234.265 Timing relays and timing devices.

Each timing relay and timing device shall be tested at least once every twelve months. The timing shall be maintained at not less than 90 percent nor more than 110 percent of the predetermined time interval. The predetermined time interval shall be shown on the plans or marked on the timing relay or timing device. Timing devices which perform internal functions associated with motion detectors, motion sensors, and grade crossing predictors are not subject to the requirements of this section.

§ 234.267 Insulation resistance tests, wires in trunking and cables.

(a) Insulation resistance tests shall be made when wires or cables are installed and at least once every ten years thereafter.

(b) Insulation resistance tests shall be made between all conductors and ground, between conductors in each multiple conductor cable, and between conductors in trunking. Insulation resistance tests shall be performed when wires, cables, and insulation are dry.

(c) Subject to paragraph (d) of this section, when insulation resistance of wire or cable is found to be less than 500,000 ohms, prompt action shall be taken to repair or replace the defective wire or cable. Until such defective wire or cable is replaced, insulation resistance tests shall be made annually.

(d) A circuit with a conductor having an insulation resistance of less than 200,000 ohms shall not be used.

(e) Required insulation resistance testing that does not conform to the required testing schedule of this section shall be completed in accordance with the following schedule:

- (1) Not less than 50% by the end of calendar year 1996;
- (2) Not less than a total of 75% by the end of calendar year 1997; and
- (3) One hundred percent by the end of calendar year 1998.

§ 234.269 Cut-out circuits.

Each cut-out circuit shall be tested at least once every three months to determine that the circuit functions as intended. For purposes of this section, a cut-out circuit is any circuit which

overrides the operation of automatic warning systems. This includes both switch cut-out circuits and devices which enable personnel to manually override the operation of automatic warning systems.

§ 234.271 Insulated rail joints, bond wires, and track connections.

Insulated rail joints, bond wires, and track connections shall be inspected at least once every three months.

§ 234.273 Results of inspections and tests.

(a) Results of inspections and tests made in compliance with this part shall be recorded on forms provided by the railroad, or by electronic means, subject to approval by the Associate Administrator for Safety. Each record shall show the name of the railroad, AAR/DOT inventory number, place and date, equipment tested, results of tests, repairs, replacements, adjustments made, and condition in which the apparatus was left.

(b) Each record shall be signed or electronically coded by the employee making the test and shall be filed in the office of a supervisory official having jurisdiction. Records required to be kept shall be made available to FRA as provided by 49 U.S.C. 20107 (formerly § 208 of the Federal Railroad Safety Act of 1970 (45 U.S.C. 437)).

(c) Each record shall be retained until the next record for that test is filed but in no case for less than one year from the date of the test.

REQUIREMENTS FOR PROCESSOR-BASED SYSTEMS

§ 234.275 Processor-based systems.

(a) *Applicable definitions.* The definitions in § 236.903 of this chapter shall apply to this section, where applicable.

(b) *Use of performance standard authorized or required.* (1) In lieu of compliance with the requirements of this subpart, a railroad may elect to qualify an existing processor-based product under part 236, subparts H or I, of this chapter.

(2) Highway-rail grade crossing warning systems, subsystems, or components that are processor-based and that are first placed in service after June 6,